

Title (en)

Method of transforming periodic signal using smoothed spectrogram, method of transforming sound using phasing component and method of analyzing signal using optimum interpolation function

Title (de)

Verfahren zur Transformierung eines periodischen Signales unter Verwendung eines geplätteten Spectrogrammes, Verfahren zur Transformierung von Schall bei Verwendung von Phasenkomponenten und Verfahren zur Analyse eines Signales unter Verwendung einer optimalen Interpolationsfunktion

Title (fr)

Méthode pour transformer un signal périodique utilisant un spectrogramme adouci, méthode pour transformer du son utilisant une partie composante d'un signal de mise en phase et méthode pour analyser un signal utilisant une fonction d'interpolation optimale

Publication

EP 0822538 A1 19980204 (EN)

Application

EP 97112087 A 19970715

Priority

- JP 20084596 A 19960730
- JP 34424796 A 19961224

Abstract (en)

At a smoothing spectrogram calculation portion (10), a triangular interpolation function having a frequency width twice that of the fundamental frequency of a signal is obtained based on information on the fundamental frequency of the signal. The interpolation function and a spectrum obtained at an adaptive frequency analysis portion (9) are convoluted in the direction of frequency. Then, using a triangular interpolation function having a time length twice that of a fundamental period, the spectrum interpolated in the frequency direction described above is further interpolated in the temporal direction, in order to produce a smoothed spectrogram having the space between grid points on the time-frequency plane filled with the surface of a bilinear function. Using the smoothed spectrogram, a speech sound is transformed. Therefore, the influence of periodicity in the frequency direction and the temporal direction can be reduced. <IMAGE>

IPC 1-7

G10L 3/02; **G10L 5/06**; **G10L 7/08**; **G10L 9/06**; **G10L 9/18**

IPC 8 full level

G10L 21/003 (2013.01); **G10L 21/013** (2013.01); **G10L 21/04** (2013.01); **G10L 25/00** (2013.01); **G10L 25/27** (2013.01)

CPC (source: EP US)

G10L 21/04 (2013.01 - EP US); **G10L 25/48** (2013.01 - EP US); **G10L 2021/0135** (2013.01 - EP US)

Citation (search report)

- [A] WO 9516259 A1 19950615 - KONINKL PHILIPS ELECTRONICS NV [NL], et al
- [A] WO 9418666 A1 19940818 - BRITISH TELECOMM [GB], et al
- [A] WO 9319378 A1 19930930 - NAT INSTR [US]

Cited by

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Designated contracting state (EPC)

DE FR GB

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EP 0822538 A1 19980204; **EP 0822538 B1 19981230**; CA 2210826 A1 19980130; CA 2210826 C 20011106; DE 69700084 D1 19990211; DE 69700084 T2 19990610; JP 3266819 B2 20020318; JP H1097287 A 19980414; US 6115684 A 20000905

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